

IDENTIFICATION OF THE PARAMETERS CONCERNING YOUNG ADULTS' TAKING EPISTEMIC RISKS IN THEIR SOCIAL MEDIA POSTS WITH ACADEMIC CONTENT

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ABSTRACT

The present study aims to identify and investigate the parameters of taking academic epistemic risks concerning undergraduate young adults who are considered to use social media more frequently than any other users. The study was carried out following a mixed methodology. The study observes the principles of exploratory sequential design of the mixed method. In an exploratory mixed study, initially a theoretical proposition is obtained through a qualitative methodology; then this proposition is tested with a quantitative method. A case study as the qualitative part was conducted over 15 university students who use social media. As a result of the qualitative study, the parameters which were discovered to exert effects on young adults' epistemic risk taking in their social media posts with academic content were identified. A survey research study was carried out with a measurement tool developed by the researchers to assess the obtained parameters. By means of the survey performed over 215 undergraduates, the parameters of epistemic risk were tested. There are individual- and environment-related parameters affecting young adults' taking academic epistemic risk on social media. It was found out from the analyses of these parameters that the parameters knowledgeability, academic knowledgeability, and ethics have direct effects of academic epistemic risk taking. It was also revealed that the parameters self-esteem, responsibility, educational background, and virtual social capital are potentially effective.

KEYWORDS

Epistemic Risk, Epistemic Uncertainty, Young Adults, Social Media, Education, Academic Content

1. INTRODUCTION

When the 21st century's patterns of behavior are taken into account, it can be realized that the pattern of behavior apparently differs from the one in the previous centuries: humans' hunger for knowledge and efforts to suppress this hunger (Gore, 1998; Gupta and Govindarajan, 2000). The interaction and interdependence of the person seeking solutions to this hunger problem have not been so functional and qualified as well as so oppressive and unqualified throughout human history. When the culture of human interaction with information is examined, it is observed that the evolution of technology creates a multidimensional structure in which micro-cultures are formed, opportunities of globalization are spread, and the pluralism and democracy are sustained. Web2.0 technologies, which mediate this interaction, also provide a network of opportunities by offering numerous cultural backgrounds. In view of this cultural background, people in the 21st century display an addiction/preference that spread their social media habits every passing hour assuming the role of consumer, producer, and prosumer (Ritzer, Dean & Jurgenson, 2012; Ritzer and Jurgenson, 2010). This interaction background (Web2.0 platforms) creates an undeniable contribution to the level of information literacy of individuals, creating an educational opportunity that have not been able to be realized up to now in the context of equal opportunity in the history scene. However, these Web 2.0 platforms are becoming a unique tool for epistemic oppression in dualist epistemological belief cultures where dependency cultures dominate (Dotson, 2014; Fricker, 1999; Labbas, 2013). In this framework, the question of how these two extremes (epistemic freedom-epistemic oppression) can emerge on a shared ground is highlighted. The premise and essential tool that provide opportunities for individuals to move from oppression to freedom is epistemic risk. Epistemic risk is the individual's decision about right or wrong when there is uncertainty. Therefore, it is an attempt to end epistemic oppression and enrich the epistemic freedom

base (Riggs, 2008; Simon, 2008; Velleman, 1989). In this educational space (social media platforms) where freedom-oppression conflicts are experienced, users have the opportunity to take epistemic risk through social, cultural, entertainment, political, academic and similar contents. However, it is observed that epistemic risk taking behaviors remain weak, especially regarding the academic content, when the stated contents are taken into consideration. This leads to the existence of epistemic violence and epistemic oppression in academic subjects, and causes information elites to consciously or unconsciously conduct social engineering. Individuals must take epistemic risk in academic matters, open themselves to epistemic freedom and avoid the monopolistic acculturation process. In this study, it is aimed to determine the parameters of academic epistemic risk taking in young adults' (university students) social media posts and to test these parameters.

1.1 Conceptual Framework

Risk is a significant determiner between success and failure of learners during the course of their education process. Any educational attempt at micro- and macro-level brings along risks. Risk is a case that can be positioned between the known and the unknown. It is a motivation or anxiety tool between the wanted and unwanted result of any undertaken activity (Bondy & Pritchard, 2016). Risk appearing in an ambiguous setting may lead to beneficial or detrimental results and is likely to affect at least one educational goal. Faced risks and their outcomes become more critical in consideration of the gravity of uncertainty especially over students' academic studies. Uncertainty about educational endeavors is generally referred to as epistemic uncertainty. Epistemic uncertainty occurs when a piece of information is missing or wrong (Curcuro, Galante & La Fata, 2012; Dubois & Guyonnet, 2011; Rohmer & Baudrit, 2011). The educational goals of the 21st century require learners to produce highly functional information by employing their higher-order cognitive skills. In such a case, epistemic uncertainty becomes an inevitable phenomenon for learners in the society of information overload as incurred by the information age. In the face of epistemic risk, learners are required to justify their attempts to retrieve the truth. Therefore, they are to run the risk of making mistakes. This is because knowledge cannot be acquired without taking the risk of failure. In this sense, for a proper epistemic risk management learners should skillfully analyze options and draw rational inferences (Godden, 2017). Constructivism having been located in the center of learning approaches too advocates this statement (Glaserfeld, 1989). Thusly, it can be claimed that epistemic uncertainty faced by learners may serve as an opportunity for intellectual development and this opportunity can be taken advantage of through epistemic risk.

Learners only as passive recipients due to traditional educational mindset and its implications in educational policies cannot develop and hone their skills to produce new knowledge and evaluate the existing one (Lloyd, 1976). Assignment of decision-making capacity in relation to the appreciation of the value of and the subsequent operationalization of knowledge to an authority has turned into a traditional practice. Teachers, books, cultures, media, ideologies, religion, politicians, decision-makers are presented as examples of authority. As a result, learners' epistemological beliefs weaken and they take the authority for a benchmark of what is right or wrong in relation to information retrieval (Haerle and Bendixen, 2007; Jehng, Johnson and Anderson, 1993; Pauler Kuppinger and Jucks, 2017). Hence, social engineering, which some have attempted to end based on the Culture Industry criticism of the Frankfurt School, is still in effect in the information age of the 21st century (Henning, 2017). Learners in the age of informatics have opportunities humans have never availed themselves of throughout the human history. However, in the event that the level of epistemological belief is not high and intellectuality is underdeveloped, people again tend to take authority for a standard. As a consequence, in relation to how learners accept and decide upon information, they should adopt strategies in which they have strong ontological and epistemological assumptions (Haerle and Bendixen, 2007). An analysis of social media habits in 2017 indicates a global consumption of social media (www.statista.com). Excessive interaction with social media poses an opportunity-problem dilemma for individuals. If regarded as an opportunity, one can make a mention of intellectual societies actively generating knowledge and seeking to produce intellectual added value by taking their own epistemic risks in a universe of relative knowledge (Taylor, 2017), for the age of informatics of the 21st century has a culture of information in which the understanding of "a single truth" has come to an end, epistemic uncertainty is in active operation, and there are relatively valid truths. In a culture where dialectical process is regarded as the groundwork for knowledge generation, the views of each and every member of the society should be considered as required by a culture of common sense and reconciliation (Marinopoulou, 2017). Therefore, since members of a society have the potential to generate added value with their individual differences, they

are expected to take an epistemic risk avoiding authority as a standard and relying on their intellectual richness.

It is important for individuals to be raised in the aforesaid, culture and have an improved intellectual quality for them to be able to take epistemic risks. Otherwise, epistemic risk turns into a threat rather than an opportunity. Taking epistemic risk with limited knowledge and limited rationalization capability may lead us to mistake wrong (invalid) information and even destructive beliefs for true and beneficial ones (Jain, 2004; Mathiesen, 2006; Phillips, 1995). In this sense, it is imperative that one consider parameters allowing for questioning of epistemic syntheses and epistemic acceptances. For example, in the event that a proposition put forward by taking an epistemic risk turns to be true, the resultant well-being may impede inquiries into the rational and scientific foundation of our acceptances (Freedman, 2015). In each phase of questioning in the presence of epistemic uncertainty, we must never overlook the fact that we tend to make mistakes in our epistemic choices and decisions and may draw wrong (invalid) conclusions (Botterill, 2008; Kukla, 2017; Parascandola, 2010).

Individuals' attitudes and tendencies concerning epistemic risks vary (Fallis, 2007). Moreover, risks taken in the face of epistemic uncertainty are evaluated differently by different individuals (Riggs, 2008). Thus, investigations into epistemic risk taken by individuals and groups constituting a community are likely to produce results that are more valid if they are conducted over groups with similar characteristics. The quality of young adults' (between 18 and 35 years and having completed the basic education) capacity to produce knowledge-oriented added value is a matter of curiosity since they are among the groups most frequently interacting with information in the age of informatics. Consequently, the rate of their social media use is high too. Social media is also used for academic purposes as much as for entertainment, political, cultural and other purposes (Lau, 2017; Manca and Ranieri, 2016; Novakovich, Miah and Shaw, 2017; Sanchez, Cortijo and Javed, 2014). Besides, from this perspective social media looks like an opportunity (Smith, 2016). In this study, parameters pertaining to young adults' epistemic risk taking are investigated. It is both a theory- and practice-based study built on descriptive analyses of young adults' behaviors of epistemic risk taking.

2. METHODOLOGY

The study is performed with Exploratory Sequential Design from Mixed Research Designs (Creswell and Clark, 2011). First, a Case Study was conducted with 15 university students who are social media users in the qualitative method. As a qualitative analysis, parameters affecting the academic epistemic risk taking of young adults in social media sharing have been defined. Subsequently, in the quantitative method, Survey research was carried out with the data collection tool developed by the researchers related to the determined parameters. As a result of the survey conducted with 215 university students, epistemic risk parameters were tested.

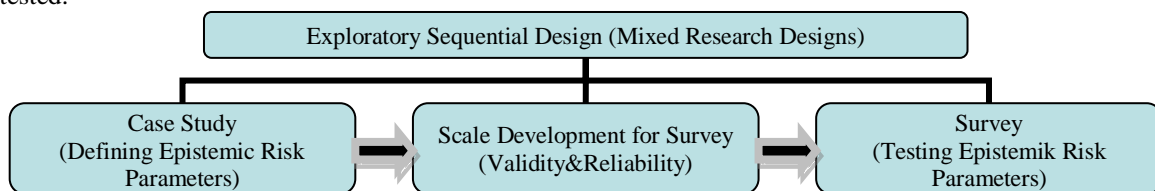


Figure 1. Research Flow Chart

2.1 Participants

The present study was conducted on undergraduate young adults. Young adults between 18 and 35 years were included in the study. All the participants are citizens of the Republic of Turkey. 15 young adult volunteers were included in the case study. The participants were undergraduate students, who received media literacy education, are knowledgeable about epistemic risk and they are known to take and have taken epistemic risks. Besides, the survey was carried out over 215 young adults. The participants were selected assuming that they were undergraduates using social media. In this sense, 151 young adults taking and 64 avoiding epistemic risks in their social media posts with academic contents were included in the study. Whether the participants took epistemic risks was determined by their declaration.

2.2 Data Collection Tools and Data Analysis

A semi-structured interview form was employed for the purpose of the case study. The participants were asked to state “the reasons why they cannot take epistemic risks concerning academic issues in their social media activities”. The gathered data were analyzed by content analysis. In content analysis, open coding, axial coding, selective coding, and theoretical coding were employed. With theoretical coding, themes were created and epistemic risk parameters were identified.

For the survey, a scale was produced based on the parameters retrieved in the case study. Each parameter constituted a factor of the scale. It was revised in consideration of the views of faculty members specialized in media literacy and Curriculum and Instruction Programs for improved content validity. The internal consistency coefficient (Cronbach’s Alpha) of the measurement instrument consisting of 33 items and 12 factors was calculated to be .906, which means that the measurement instrument is reliable. SPSS 21.0 was used to analyze the data which were also descriptively analyzed.

3. FINDINGS

3.1 Identification of the Parameters of Young Adults’ Epistemic Risk Taking in their Social Media Posts with Academic Content

In the table below (Table 1) are the parameters which were discovered to exert effects on young adults’ epistemic risk taking in their social media posts with academic content by means of the interviews with 15 participants in the case study, which is the qualitative component of the study.

Table 1. Parameters of Academic Epistemic Risk Taking

Categories - Axial Coding	Concepts - Selective Coding	Themes - Theoretical Coding	Dimensions
Imperfect knowing, knowing wrong, incompetent command of content knowledge, invalid information	Knowledge and knowing	Knowledgeability	Individual-related parameters – Endogenous epistemic risk barriers/opportunities
Academic skill deficit, academic inquiry skill deficit, incompetent academic thinking skills, thinking skills deficit	Academic skills and abilities	Academic knowledgeability	
Destructive criticism, intolerance to criticism, weak criticism, presence of anti-thesis to refute thesis	Criticism culture and individual	Criticism	
Likes, follows, popularity, being center of attention, social status, social reward	Protection and preservation of virtual identity and popularity	Social acceptance	
“I” as the source of failure, incompetent “I”, “I” outside of change, anxiety of uselessness	Anxiety over what “I” can do.	Self-esteem	
Failure to self-authorize, failure to associate with the self, the role of recipient, ignorance	Passive recipient-active producer dilemma	Responsibility	
Incompetency, it is not appropriate to affect others despite incompetency, assuming ethical responsibility	Assignment of the area of freedom by ethical principles	Ethics	Environment-related parameters – exogenous epistemic risk barriers/opportunities
Legal responsibility, academic role and responsibilities, authority pressure, authority dominance, authority’s reaction	Authority anxiety and freedom restrictions by authority	Authority pressure	
Anxiety over exclusion from group, group reaction, disruption of in-group harmony, social reward/interest loss, acceptance of group norms	Group belonging	Spiral of silence	
Member profile, members’ interests, members, member quality	Community profile	Network society profile	
Educational background, education quality, education content, educational achievement	Education support	Educational background	
Trust in social networks, trust in members, trust in groups	Social capital	Virtual social capital	

Table 1 reveals that parameters of academic risk taking in relation to social media posts with academic content consist of two different theoretical propositions. There form two themes, e.g. Individual-related and environment-related parameters concerning epistemic risk. While individual-related parameters are identified as endogenous epistemic risk barriers/opportunities, environment-related parameters refer to exogenous epistemic risk barriers/opportunities. Accordingly, individual's epistemic risk taking in their social media posts about academic matters may be affected by variables such as their own characteristics, knowledgeability, profiles, but also by those such as virtual social environment and roles, groups and cultures created by this environment. Theoretical propositions obtained from the results of the qualitative analyses, which refers to the first part of the research, are as follows:

Epistemic risk taking of undergraduate young adults in their social media posts with academic content is potentially affected by;

- Individual-related parameters such as individual's knowledge repository, quality of academic knowledge, criticism anxiety, social acceptance anxiety, self-esteem level, sense of responsibility and ethical anxiety,
 - Environment-related parameters, e.g. authority pressure, spiral of silence, profile of the network society, educational background and level of virtual social capital.
- Operational definitions of the parameters are provided below:

Knowledgeability: Individual's holding a basic repository of knowledge on the academic content of the posts.

Academic knowledgeability: Individual's high-order thinking skills (for example, argumentative thinking, creative thinking, critical thinking), tendency to academic inquiry, hold of academic curiosity.

Criticism: Individual's openness to criticism over his/her social media posts with academic content.

Social acceptance: High popularity of individual's profile he/she created in his/her social media account.

Self-esteem: Individual self-esteem to be able to send a functional academic social media post.

Responsibility: Individual's sense of responsibility to the academic social media post.

Ethics: Individual's observation of ethical principles in the academic social media posts.

Authority pressure: Legal status with proven specialization pertaining to academic issues (scientist, researcher author, etc.)

Spiral of silence: Individual's persistence in abiding by the group rules not to be excluded from the group when he/she contradicts the group norms (Noelle-Neumann, 1984).

Network society profile: Characteristics of the virtual society formed by individuals using social media accounts.

Educational background: Individual's educational background as to how to send a social media post with academic content.

Level of virtual social capital: The level of individual's trust in social media networks and users in social media networks.

3.2 Investigation of the Parameters of Young Adults' Epistemic Risk Taking in their Social Media Posts with Academic Content

This part is intended to investigate whether the parameters identified in the previous section are effective in young adults' taking epistemic risks in their social media posts with academic content.

Table 2. Test Results Concerning the Parameters of Academic Epistemic Risk Taking

Dimensions	Parameters	Results of Who take epistemic risks			Results of Who don't take epistemic risks		
		N	Mean*	Standard deviation	N	Mean*	Standard deviation
Individual-related parameters / Endogenous epistemic risk barriers/opportunities	Knowledgeability	151	4.0464	.76016	64	4.3333	.72496
	Academic knowledgeability	151	3.0513	.83333	64	3.5039	.92205
	Criticism	151	2.1104	.81624	64	2.2604	.96950
	Social acceptance	151	1.9007	.74793	64	2.1156	.88142
	Self-esteem	151	2.2958	.86713	64	2.6927	.98723
	Responsibility	151	2.1854	.91399	64	2.7578	1.01962
	Ethics	151	3.1391	1.29120	64	3.5469	1.32053
Environment-related parameters / Exogenous epistemic risk barriers/opportunities	Authority pressure	151	2.3775	.82702	64	2.5885	.93481
	Spiral of silence	151	1.9834	.81938	64	2.1797	.93591
	Network society profile	151	2.3742	.85677	64	2.4688	.94648
	Educational background	151	2.6788	.96669	64	2.9688	1.03078
	Virtual social capital	151	2.4238	.78969	64	2.6250	.94747

*1.00-2.50: Ineffective; 2.51-3.50: Potentially effective; 3.51-5.00: Effective

Parameters' effectiveness was assessed according to the participants taking and not taking epistemic risks.
Assessment of individual-related parameters:

It was inferred from the views of the participants taking epistemic risks that only "knowledgeability" of individual-related parameters was considered to be effective. The parameters deemed potentially effective were "academic knowledge" and "ethical concern". The parameters "criticism anxiety", "social acceptance anxiety", "self-esteem", and "responsibility" were not considered effective.

According to the views of the participants not taking epistemic risks, "knowledgeability", "academic knowledgeability", and "ethical concerns" are effective. The parameters considered potentially effective were "self-esteem" and "responsibility". The parameters "criticism anxiety" and "social acceptance anxiety" were not considered effective.

Assessment of environment-related parameters:

No environment-related parameter was found to be effective in epistemic risk taking.

According to the participants taking epistemic risk, the only parameter potentially effective was "educational background". The parameters "authority pressure", "spiral of silence", "network society profile", and "virtual social capital" were expressed to be ineffective.

According to the participants not taking epistemic risks, the parameters "educational background" and "level of virtual social capital" were potentially effective. The parameters "authority pressure", "spiral of silence", and "network society profile" were not effective.

4. CONCLUSION

Table 3. Parameters Effective in Young Adults' Taking Epistemic Risks in their Social Media Posts with Academic Content

Dimensions	Assessment	Young adults taking epistemic risks	Young adults not taking epistemic risks
Individual-related parameters – Endogenous epistemic risk barriers/opportunities	Effective	"Knowledgeability"	"Knowledgeability", "Ethics", "Academic knowledgeability"
	Potentially effective	"Academic knowledgeability", "Ethics"	"Self-esteem", "Responsibility"
	Ineffective	"Self-esteem", "Responsibility", "Criticism", "Social acceptance"	"Criticism", "Social acceptance"

Environment-related parameters – Exogenous epistemic risk barriers/opportunities	Effective	--	--
	Potentially effective	“Educational background”	“Educational background”, “Virtual social capital”
	Ineffective	“Authority pressure”, “Spiral of silence”, “Network society profile”, “Virtual social capital”	“Authority pressure”, “Spiral of silence”, “Network society profile”

The analysis of the parameters of epistemic risk taking by young adults in their social media posts with academic content revealed that the parameters varied according to individuals taking and not taking epistemic risks. Knowledgeability is the most effective epistemic risk parameter of young adults posting (commenting and producing) about academic issue on social media. Therefore, it is imperative to equip individuals with high-quality knowledge reserves for a continued exhibition of epistemic risk taking behavior by young adults. In the cases of epistemic uncertainty, individuals expected to make decisions by justification (rational thinking) instead of relying on beliefs should be intellectually educated. Besides, potentially effective academic knowledge and ethical concerns should be considered for the sustainability of the epistemic risk. Particularly, supporting thinking skills and academic skills of young adults is expected to greatly contribute. Moreover, it is recommended that an individual should sort out ethical dilemmas while taking epistemic risks.

These parameters are directly effective in motivating young adults not taking epistemic risks to take epistemic risks. Thus, it is a considerable finding that the parameters academic knowledgeability and ethics along with knowledgeability are indispensable for individuals not taking epistemic risks. Therefore, it is necessary to equip individuals not taking epistemic risks with these knowledge and skill types. In addition, the parameters self-esteem and responsibility are potentially effective. Individuals should be helped raise consciousness that taking epistemic risks is their responsibility and their self-esteem levels should be increased based on the idea that their individual differences bring in added values.

Young adults' educational backgrounds are potentially effective in taking academic epistemic risks. Thus, individuals should be presented with learning opportunities during formal education intended for academic epistemic risk taking and their educational development should be supported to achieve this goal. Additionally, the level of virtual social capital is potentially effective in young adults' taking epistemic risks. For these individuals to take academic epistemic risks, they should build trust in social networks they are a member of and in their members.

The parameters criticism, social acceptance, authority pressure, spiral of silence, network society profile, level of virtual social capital are not effective in young adults' taking epistemic risks. Young adults' autonomous behavioral characteristics and intention to stand out as autonomous individuals in pursuit of their own goals are considered to underlie this situation.

As a conclusion, individuals are advised to develop cognitive enhancement primarily in epistemic risk taking. This can be done in parallel with the educational opportunities offered to them. In formal and informal education processes, individuals should be equipped and effective in terms of both knowledge and skills. In order for these two factors to function in a functional way, the emotional equipment (as self-esteem, responsibility etc.) of the individual needs to be strengthened. In this framework, the essential requirement for individuals to take epistemic risk is to feel that they are a unique activist with individual differences.

This study has some limitations and suggestions according to these limitations. The study was conducted over young adults who were university students. Therefore, there is a need to examine what result will be reached on different populations. In addition, in the study, participants' epistemic risk-taking situations were described according to their own views. It is suggested to investigate and compare epistemic risk parameters in future studies in which individuals are monitored and tested for epistemic risk performances.

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